

Attorney Docket No. 249558US2 DIV  
Inventor: Atsuhiko SATO et al  
Preliminary Amendment filed: March 15, 2004

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-8 (Canceled)

Claim 9. (Original) A semiconductor device comprising:

a semiconductor substrate having a trench on a surface;

a first insulating film identified by a back face contacting with a bottom face and a lower part of a side face of the trench;

a bottom insulator identified by a bottom face and a side face contacting with a surface of said first insulating film;

a second insulating film identified by a back face contacting with an upper part of the side face of the trench and identified by an end face contacting with an end face of said first insulating film; and

a upper insulator identified by a side face contracting with a surface of said second insulating film and identified by a bottom face contacting an upper face of said bottom insulator.

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Claim 10. (Original) A semiconductor device comprising:

- a semiconductor substrate having a trench on a surface;
- an insulating film identified by a back face contacting with the surface of said semiconductor substrate and having a first opening on the trench;
- a polysilicon film disposed on a surface of said insulating film and having a second opening over the trench;
- a silicon oxide film identified by a back face contacting with a bottom face and a side face of the trench and a side face of the second opening of said polysilicon film and identified by a uniform film thickness; and
- an insulator identified by a bottom face and a side face contacting with a surface of said silicon oxide film.

Claim 11. (Original) The semiconductor device of claim 10, wherein an aspect ratio of the trench exceeds three.

Claim 12. (Original) A semiconductor device comprising:

- a semiconductor substrate having a first trench on a surface;
- a silicon oxide film identified by a back face contacting with a bottom face and a side face of the first trench;
- a bottom insulator identified by a bottom face and a side face contacting with a surface of said silicon oxide film and identified by an upper face having a second trench; and

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an upper insulator identified by a bottom face and a side face contacting with the second trench and identified by a height of an upper face being equal to that of an upper face of said bottom insulator.

Claim 13. (Canceled)